

IN THE DRAWINGS:

The attached sheet of drawings includes changes to FIG. 8. The attached sheet replaces the previous drawing sheets submitted for FIG. 8. In FIG. 8, previously omitted element 500 has been added. (See attached Replacement Sheet(s) and Annotated Sheet(s) Showing Changes.)

REMARKS/ARGUMENTS

The Office Action mailed March 16, 2005, has been received and reviewed. Claims 1 through 51 are currently pending in the application. Claims 1 through 21 and 42 through 46 have been withdrawn from consideration as being drawn to non-elected inventions and have been canceled.

Claims 22 through 41 and 47 through 51 stand rejected. Claims 22-24, 27-30, 33-38, 40, 41, 47, 50 and 51 have been amended herein as described in more detail below to clarify the nature of the invention with respect to the references as applied, and new claims 52 and 53 added to recite subject matter deleted from other dependent claims. No new matter has been added.

Applicants respectfully request reconsideration of the application as amended herein.

Information Disclosure Statement(s)

Applicants note the filing of an Information Disclosure Statement herein on August 27, 2003, and note that although an initialed copy of the PTO-1449 was returned with the outstanding Office Action, a reference on page 1 under "Other Documents" entitled "Sponge Coring" has not been initialed. Applicants respectfully request that *all* information cited on the PTO-1449 be considered and made of record herein. Also, Applicants respectfully request a copy of page 1 of the PTO-1449 indicating that the "Sponge Coring" reference has been considered and initialed by the Examiner.

Drawing Objections

The drawings have been objected to under 37 CFR 1.83(a) for not showing every feature of the invention specified in the claims, and specifically claims 24, 36 (sic, it is believed the reference should have been to claim 38) and 28. Applicants have amended these claims to address the Examiner's concerns.

The drawings have been objected to under 37 CFR 1.84(p)(5) for not including reference numeral 500 mentioned in the description. Applicants respectfully traverse, in that reference numeral 500 is already shown in drawing FIGS. 1C and 12C, but has been added to amended FIG. 8, the latter submitted with this amendment, to further address the Examiner's concerns.

The drawings have been objected to under 37 CFR 1.84(p)(5) for including reference numeral 421 which was not mentioned in the description. Applicants respectfully traverse, in that reference numeral 421 is shown in the description at paragraph [0088]. To accommodate the examiner further, however, Applicants have also amended paragraph [0081] to provide a second, earlier reference for this element.

Specification Objection

The disclosure was objected to because the cross-reference application data needed updating. Appropriate correction has been made by amendment set forth above.

35 U.S.C. § 102(b) Anticipation Rejections

Anticipation Rejection Based on U.S. Patent No. 4,502,553 to Park et al.

Claims 22 through 24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Park et al. (U.S. Patent No. 4,502,553). Applicants respectfully traverse this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicants have amended claim 22 to more clearly distinguish over the reference. Applicants note that claim 22, prior to amendment, recited, inter alia, “at least one groove formed in an inner cylindrical surface thereof.” Park et al. clearly describes (Col. 3, lines 40-41) a cylindrical sponge disposed on the interior walls of a cylindrical support member or liner 52, and that (Col. 3, line 66 – Col. 4, line 1) a plurality of longitudinal reinforcing members 56 disposed on the inner surface thereof and extending radially inwardly within the sponge 50. Thus, Park et al. failed to describe at least one groove formed in an inner surface of the tubular sleeve. However, to more clearly distinguish the structure of the present invention from that of Park et al., Applicants have further amended claim 22 to recite that the at least one groove extends into the thickness of the wall of the tubular sleeve. Reconsideration and withdrawal of the rejection is respectfully solicited.

Claim 23 is allowable as depending from claim 22 and, further, as amended, because Park et al. fails to describe either of the claimed structures. New claim 52 recites the subject matter deleted from claim 23, and is allowable as depending from claim 22.

Claim 24 is allowable as depending from claim 22 and, further, because Park fails to describe a groove formed in a wall of a tubular sleeve, but rather channels or slots defined between radially inwardly extending reinforcing members 56.

Claim 26 is allowable as depending from claim 22.

Anticipation Rejection Based on U.S. Patent No. 4,716,974 to Radford et al.

Claim 47 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Radford et al. (U.S. Patent No. 4,716,974). Applicants respectfully traverse this rejection, as hereinafter set forth.

Claim 47 has been amended to recite that the layer of sponge material is secured to an inner cylindrical surface of an inner barrel assembly prior to disposition of a core sample therein. Radford forms a foam from two chemical constituents after a core sample is received within the inner barrel, so that the foam expands within the inner barrel, fills the volume about the core sample and comes in intimate contact therewith. The method and, indeed, the entire approach employed by Radford is counter to that of Applicants as disclosed and claimed. Reconsideration and withdrawal of the rejection is respectfully solicited.

Anticipation Rejection Based on U.S. Patent No. 4,312,414 to Park

Claims 50 and 51 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Park (U.S. Patent No. 4,312,414). Applicants respectfully traverse this rejection, as hereinafter set forth.

Applicants have amended claims 50 and 51 to further distinguish the present invention from the reference. Applicants note that the webbing material 36 of Park is disposed on a longitudinal end of a layer of sponge material 22 (see FIG. 2) to separate it from an adjacent segment of spong material, rather than in the layer of sponge material. Further, it is apparent that the term “webbing” as employed by Park denotes a structure unlike Applicants’ webbing. See specifically Col. 3, lines 2-8 of Park wherein it is apparent that the “webbing” is, in fact, some sort of oil and water-impervious membrane since the reference indicates that “O-rings 32 and 34 and webbing 36 form an oil and water impermeable barrier.” The purpose of the “webbing employed by Park is to prevent longitudinal migration of wellbore fluids between longitudinally adjacent sponge sections to prevent a false reading of the location of different fluids along the length of the core. Thus, a “webbing” of Park, if used in Applicants’ apparatus, would render it inoperative to absorb wellbore fluids.

However, to further advance prosecution, Applicants have amended claims 50 and 51 to recite that the webbing layer is longitudinally disposed in the sponge material and, in the case of claim 51, that it is proximate the interior surface of the layer of sponge material.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent No. 4,502,553 to Park et al. in View of U.S. Patent No. 5,107,942 to Radford

Claims 25, 31, 32, 48, and 49 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Park et al. (U.S. Patent No. 4,502,553) in view of Radford (U.S. Patent No. 5,107,942). Applicants respectfully traverse this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references

themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

The 35 U.S.C. § 103(a) obviousness rejections of claims 25, 31, 32, 48, and 49 are improper because the references, as combined, fail to teach or suggest all the claim limitations and there is no motivation to combine the two references.

Applicants note that Park et al. employs what might be termed a "double walled" inner barrel assembly comprising an inner barrel 18 and a liner 52 slidably disposed therein, the liner carrying sponge 50. In contrast, Radford is not directed to sponge coring and addresses the issue of stabilizing and providing free rotation of a "single walled" inner tube by disposing one or more stabilizer subs carrying tubular bearings which contact inner wall of the outer core barrel, rotating therewith and permitting the inner tube to maintain a stationary (nonrotating) position rather than sagging and contacting or otherwise binding with and, thus, rotating with the outer core barrel. Radford merely indicates that inner tubes of fiberglass and aluminum are known, and not that an inner barrel assembly and a tubular sleeve of a sponge liner disposed within the inner barrel assembly formed of the same material or of two materials exhibiting like rates of thermal expansion. It is respectfully asserted that the two references, in combination, simply fails to teach or suggest the claimed structure and that, absent an impermissible reference to Applicants' own specification, there would be no motivation to combine the references from a mere mention of aluminum in Radford in the context of coring inner tube used for other than sponge coring and the fact that Park et al. employs a double walled, sponge coring inner core barrel and sponge liner combination.

Thus, Applicants respectfully assert that claims 25, 31, 32, 48 and 49 are not obvious in light of the asserted combination of references and that claim 25 is further allowable as depending from claim 22.

Obviousness Rejection Based on U.S. Patent No. 4,502,553 to Park et al. in View of U.S. Patent No. 4,312,414 to Park

Claims 27 through 30, 33, and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Park et al. (U.S. Patent No. 4,502,553) in view of Park (U.S. Patent No. 4,312,414). Applicants respectfully traverse this rejection, as hereinafter set forth.

Claims 27, 28, 29, 30, 33 and 34 have each been amended to further patentably distinguish over the combination of references.

Claim 27 has been amended to recite the orientation of the contour being nonperpendicular to the longitudinal axis of the tubular sleeve, while claim 28 has been amended to recite that the contour is a bevel contour.

Claims 29, 30, 33 and 34 have been amended in the same fashion as claims 50 and 51 to recite the specific orientation and positioning of the webbing. And, as noted previously, the term “webbing” is misused in the reference relied upon by the Examiner, as using “webbing” in the sense of the reference would result in a sponge liner which could not absorb wellbore fluids.

Obviousness Rejection Based on U.S. Patent No. 4,502,553 to Park et al. in View of U.S. Patent No. 4,716,974 to Radford et al.

Claims 35 through 39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Park et al. (U.S. Patent No. 4,502,553) in view of Radford et al. (U.S. Patent No. 4,719,974). Applicants respectfully traverse this rejection, as hereinafter set forth.

Claims 35 through 38 have been amended to further patentably distinguish over the references as applied. Applicants again note that Radford forms a foam within his inner tube after a core sample is received therein and, therefore, is not a suitable candidate for combination with Park et al., which uses a preformed sponge layer, to arrive at a single wall inner tube with a sponge layer on the interior thereof prior to disposition of a core sample therein. In other words, there is no motivation to combine the references and, even as attempted to be combined, all of the claim limitations are not taught or suggested absent an impermissible hindsight reference to Applicants' own specification.

Claims 36 through 39 are allowable as depending from claim 35 and, further, claims 36 and 37 are allowable because claim 36 has been amended to recite the location of the at least one

groove in the wall of at least one inner tube section and claim 37 has been amended to recite the orientation of the at least one groove. New claim 53 has been added to recite the subject matter deleted from claim 37.

Reconsideration and withdrawal of the rejection of claims 35 through 39 is respectfully solicited.

Obviousness Rejection Based on U.S. Patent No. 4,502,553 to Park et al. in View of U.S. Patent No. 4,716,974 to Radford et al. and Further in View of U.S. Patent No. 4,312,414 to Park

Claims 40 and 41 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Park et al. (U.S. Patent No. 4,502,553) in view of Radford et al. (U.S. Patent No. 4,719,974), as applied to claim 35 above, and further in view of Park (U.S. Patent No. 4,312,414). Applicants respectfully traverse this rejection, as hereinafter set forth.

Applicants reiterate the fact that Park misuses the term “webbing” to denote an imperforate membrane, the use of which would render Applicants’ apparatus inoperative. Further, Applicants have amended claim 40 to recite the orientation of the webbing disposed in the sponge layer, and amended claim 41 to more precisely define the positioning thereof as claimed. The combination of references fails to teach or suggest the claim elements of claims 40 and 41, and Applicants’ respectfully request reconsideration and withdrawal of the rejection.

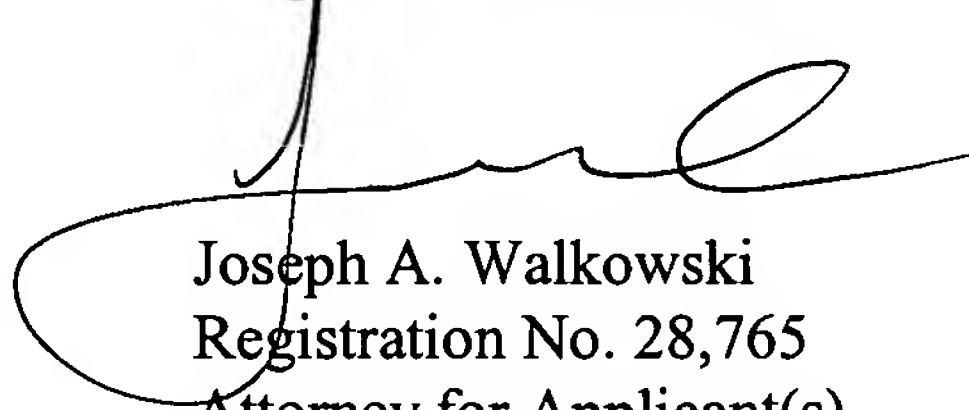
ENTRY OF AMENDMENTS

The amendments to claims 22-24, 27-30, 33-38, 40, 41, 47, 50 and 51 and new claims 52 and 53 should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application.

CONCLUSION

Claims 22-41 and 47-53 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,



Joseph A. Walkowski
Registration No. 28,765
Attorney for Applicant(s)
TRASKBRITT
P.O. Box 2550
Salt Lake City, Utah 84110-2550
Telephone: 801-532-1922

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JAW/ps:slm

Attachments: Replacement Sheet(s) (drawings)
Annotated Sheet(s) Showing Changes (drawings)

Document in ProLaw

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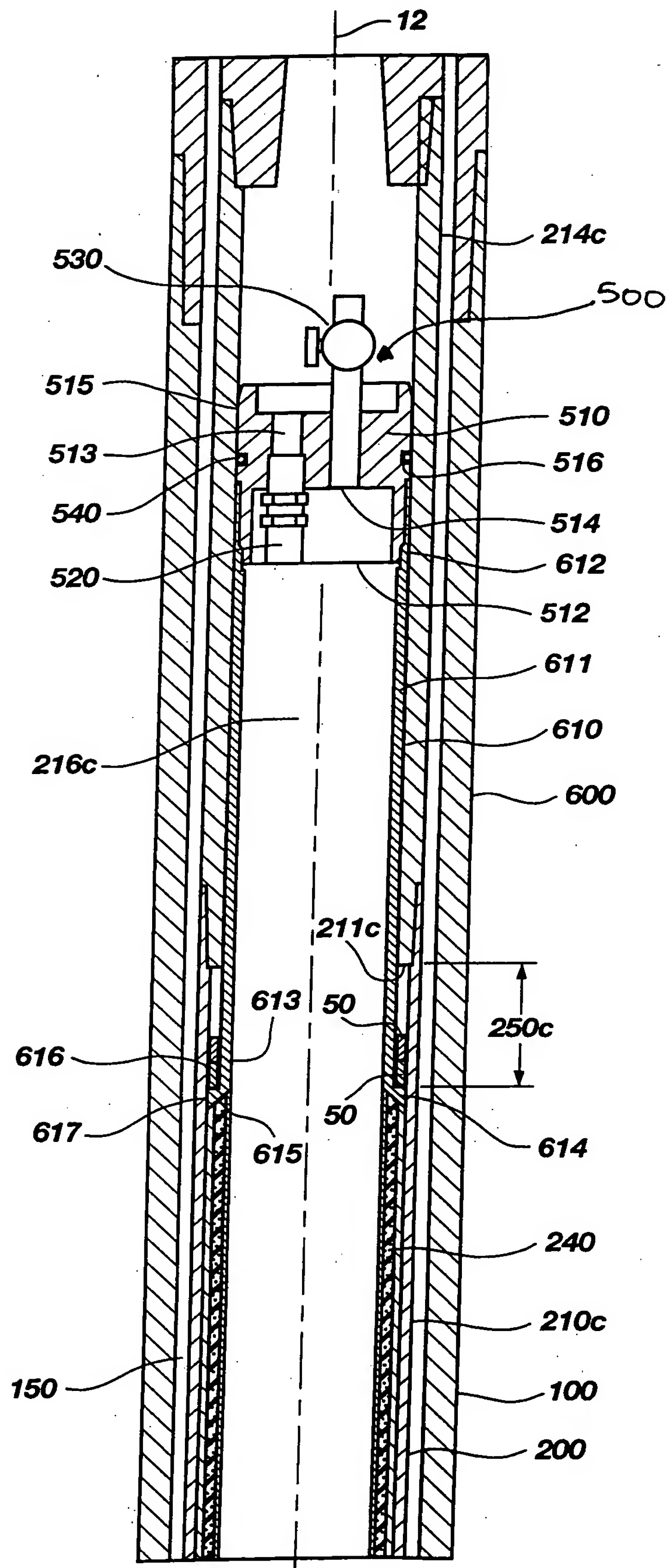


Fig. 8